

ABSTRACT

A high mass flow sensor device having a flow restrictor formed by a body having a generally cylindrical shape with an upstream end and a downstream end separated by a center portion having pressure taps proximate the junction of the ends with the center portion. Flow passes from upstream to downstream. The upstream end has a decreasing tapering inner surface for contact with the flow and the downstream end having an increasing tapering inner surface for contact with the flow. A center portion has radial and axial restrictor elements positioned forming axial openings in the path of flow through the center portion. The restrictor elements having tapered leading edges. One opening is formed by a central tube having a predetermined diameter and the remaining openings are radially extending members supporting the central tube, each of the radially extending members having substantially the same cross-sectional area as the central tube.